

RECORD

4

Collection by Eliza M. B.

146 . 0M

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(ପ୍ରକାଶକ - ରାଜମେଳ)

Collection and Field Note Book

No. 41

(May 28, 1955--Dec. 4, 1955)

(36377 - 36626)

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36377-36626



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1

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nd
er

W 2 1955 Virginia

May 28 - North entrance to Skyline Drive
36377 *Wisteria frutescens* (L.) Poir.
edge of woods on steep slope.

- May 28 - Gooney Man Overlook
steep rocky slope, sunny
1 78 *Bromus tectorum*
just below road
2 79 *Bromus*
abundant just below road
2 80 *Alyssum alpestre* L.
common just below road
2 81 *Crataegus*
occasional on
1 82 *Cheilanthes vestita*
rock crevices
1 83 *Chionanthus virginicus*
occasional on
1 84 *Rosa carolina*
abundant locally on
2 85 *Rhus aromatica*
common on
1 86 *Panicum linearifolium*
common locally on
1 87
common locally on
2 88 *Crataegus marginalis* Ashe
occasional on

Shenandoah Nat. Park 3

woody vine climbing
in trees, raceme pendent,
petals light violet standard
with greenish-yellow center

shrub 2 m. tall

stoloniferous, shoots
petals pink.
depressed shrub
fruits red.

calms erect,
shrub 1.5 m. tall.

① 4

1955 Virginia

May 29 - Milestone 86 on
Skyline Drive, 1 mi. S. of Black Rock,
Albemarle Co.

An area of dense scrub
principally *Quercus ilicifolia*,
but with liberal components
of *Nyssa sylvatica*, *Quercus*
prinus, *Kalmia latifolia*,
Rhododendron nudiflorum
sp., *Sassafras albidum*,
clumps of *Castanea dentata*, many of which
lower layer up to 1 m. high
of *Vaccinium vacillans*,
V. stamineum, *Pteridium*
aquininum, and locally especially
Gaultheria procumbens.

The whole unevenly 3 m. tall
clumps 1-2 m. apart,
the whole so tangled as to
be traversed with difficulty.

36389

Rhododendron nudiflorum
occasional in scrub

90 *Convolvulus spithameus*

on steep shaly road cut

3 91 *Spiraea* ~~betulifolia~~ *betulifolia* f. *campii*

on steep open road cut

3 92 *Hieracium pilosella*
on steep open road cut

Phen. Nat. Park.

5

Around edges are *Rubus*
(*Eubatus*) bushes and *Myrica*
peregrina, tangled in the
rest of the scrub.

A scattered emergent
layer, trees 10-20 m. apart
locally closer, principally
Pinus rigida and *Quercus*
prinus.

shrub 2 m. tall, leaves
slightly glaucous beneath;
most corollae dry, fresh
ones pinkish with red
tube, odor not agreeable.
flowers white,

buds pink

flowers yellow.

6

1955 Virginia

May 29. Along s.s. base
of Wildcat Ridge on fairly
level ground.

Thin forest of small
Quercus coccinea and
Q. prinus, mostly not
over 10 m. tall and 10 cm.
d.b.h., with chestnut sprouts
and a conspicuous shrub
layer, principally *Kalmia*
and a low shrub layer of
Vaccinium vacillans, etc.
Some small *Acer rubrum*
and *Pinus virginiana*, *Laserops*.

7

The *Kalmia* is in full
flower. The *Vaccinium*
fruits are well grown
but unripe.

Woods similar to
this extend along the
Crimora Fire Road north
to the Pains Run Fire Road,
though they are in
places taller and
denser.

May 29 - Near Miller Run

st. mtns. bet. 1400-1500'

Flat ground with
open wood of *Pinus*
taeda 60-75' tall, 10-12" dbh
crowns not or only just
touching, second story
unseen but averaging half
height of pines of *Quercus*
prinus, *q. velutina*, *Carya*,
etc.

~~low~~ Shrub layer scattered,
of *Quercus ilicifolia*,
Castanea pumila, saplings,
of oaks & *Carya*, etc. bassias.
Ground layer rather
dense, mostly *Vaccinium*,
racemosum and *Pteridium*
some *Rubus* (dewberry),
Ceanothus, etc.

Mush of the *Pteridium*
malformed, pinnales
somewhat ~~at~~ twisted, slightly
yellowish green, apparently
attached by a mosaic.
Some other herbs at
least along road. Also
Robinia along road.

Vitis climbing in
trees.

10

1955 Virginia

May 20 - Bear Rock Gap

2300'

36393 grassy roadside
Lithospermum australe L.
common

over Nat. Park

11

May 20 Paine Run

1500 ft.

1 94 *Quercus coccinea*

tree 25 m. tall, 4 dm. thick (acorns from ground)

3 95 *Quercus coccinea*

Tree 15 m. tall, 2 dm. thick

dominant in woods
on gentle slopeMay 20 - Black Rock Spring,
Paine Run

1900'

6 96 *Alnus serrulata*
thicket around wet

slender trees, 10 m. tall.

2 97 *Rubus alumnus* Baileyshrub \approx 1.5 m. tall,
arching primocanes erect,
1 m. tall.

wet ground below spring

spikes pendent

2 98 *Carex crinita*

tufts

2 99 *Carex swanii*

shrub, fruit green.

36400 wet ground

~~Lindera benzoin~~ (L.) Bl.

2 01 moist ground

twining over shrubs

~~Carex tribuloides~~ Wahl.

3 02 moist ground

sprouts only, to 1 m. tall,
leaves at tip white beneath.*Borneria japonica*1 03 *Populus grandidentata*abundant in thin woods
very local

12

1955 Virginia

May 29 - Paine Run at the
Horsehead

- 36404 *Epigaea repens*
in sparse woods
- 1 05 *Hypoxis hirsuta*
sparse woods
- 2 06 *Asplenium montanum*
crevices on vertical cliff,
of quartzite
- 2 07 *Carex veniformis*
in small flat meadow
of thin grass near stream
- 1 08 *Lisystrichium angustifolium*
shaded roadside
- 1 09 *Festuca octoflora*
common in small open meadow
of thin grass
- 3 10 *Vitis aestivalis*
common in thickets along stream
- 1 11 *Erigeron strigosus*
rare in bushes near stream
- 1 12 *Carex torta*
in bushes near stream

May 29 - Madison Run
south of Austin Mt.

- 2 13 *Asclepias amplexicaulis*
occasional
- 2 14 *Rumex acetosella*
occasional in grass
- 3 15 *Dianthus spicata*
abundant locally
- 2 16 *Bromus*
common

Phen. Nat. Park

13

prostrate

Flowers yellow

loose spreading tufts.

Flowers blue-violet.

erect, reddish.

woody vine. Leaves
glaucous and venulose beneath.
erect, flowers white,
disk greenish.

15001

erect (buds not open),
leaves flat horizontal, decussate.

erect, spikelets horizontal.

14

1955 Virginia

- May 29 - Sunds Picnic Area
flat ground partly open,
former CCC camp site
- 36417 *Festuca ovina*
common in open
- 2 18 *Thuja occidentalis*
one tree in old camp, persisting
after cultivation
- ? 19 *Prunus serotina*
in thicket
- 1 20 *Rhododendron calendulaceum?*
in small thicket in open
- 2 21 *Fraxinus velutina*
in semi-open
- 2 22 *Pinus virginiana*
occasional
- 2 23 *Potentilla canadensis*
abundant in open places
- 1 24 *Fragaria virginiana*
common in open places
- 2 25 *Iris pallida* Lam.
persisting from cultivation
- 3 26 *Vitis antinensis*
edge of woods
- 1 27 *Oxalis*
in open places
- 3 28 *Pathynus venosus* var. *meridionalis*
local along road ^{Bull. H.P.}
- 1 29 *Pinus rigida*
occasional in woods
- 1 30 *Asclepias quadrifolia*
occasional along road

2600'

Shen. Nat. Park

15

- dense, tufted
- tree 4 m. tall, narrow,
columnar, sterile.
- small tree 8 m. tall,
open growing
leaves glaucous beneath.
- tree 10 m. tall, inner
bark yellow.
- small tree
- procumbent, petals
yellow, scarcely emarginate
fruit red, sweet.
- flowers blue lavender.
- woody vine, climbing in
trees, leaves glaucous
beneath.
- erect, leaves red-brown
- above, flowers yellow.
- flower purplish
- small tree
- flowers pale dull pinkish

16

1955 Virginia

- 36431 *Rhododendron roseum*
occasional in sparse woods
- 2 #
2 32 *Rhododendron roseum*
on bush seen in sparse woods
- 1 33 *Gaultheria procumbens*
common in sparse woods
- 3 34 *Menziesia pilosa*
common in sparse woods

Ches. Nat. Park

17

- shrub 1.5 m. tall,
flowers bright rose pink,
strong delicious clove pink odor.
- shrub 2 m. tall, flowers
pink with reddish tinge,
clove pink odor.
- shrub 0.6 m. tall
flowers red.
- shrub 1 m. tall,
corollas ~~are~~ cream
pinkish on one side.

18

1955 Virginia

Broad
level
top

May 30 - ridge from
Skyline Drive to Rocky Top
Thin second growth
forest, trees about 1 m.
tall 1-2 dm. diam.

Largely *Quercus prinus*,
Q. rubra, a few *Carya*
many partly burned
chestnut trunks, rather small.

Understory sparse,
mostly tree saplings.
little herbaceous growth.
Sphagnum vacillans
Many chestnut sprouts.
Ceanothus occasional.
A few *Lassopras* seedlings,
also *Robinia*.

Gillenia, *T. aspium*,
Vicia, *Hedysarum* esp. in
trail), *Hypoxis*, *Smilacina*,
Solidago, *Hieracium venosum*,
Festuca octoflora (in trail)
Iris cristata, *Zizia cord.*

Locally *Pinus rigida*,
Locally *Quercus ilicifolia*
and *Rhododendron nudiflorum*,
Pteridium, *Menziesia*,
Coreopsis verticillata, *Aster*

Where there are big
trees the herbaceous
growth is more abundant
and more diversified.
Several grasses,

Then. Nat. Park

19

Helianthus, *Prenanthes*,
Galium latifolium, *Carex*
Achillea, *Heuchera*,
Lasiafraga virginica,
Antennaria, *Potentilla canadensis*.

This has been burned
by a ground fire at
some time.

Environmental determinism
of vegetation is more rigid
in extreme environments,
less so in mesic ones.

Same ridge beyond
gate to Big Run shelter -
partly covered by a
tall scrub, largely
Quercus ilicifolia,
with scattered trees
of *Q. prinus*, *Q. rubra*,
Carya sp., *Pinus strobus*,
etc.

Partly young sapling
forest of *Q. prinus*
with some admixture
of *Q. rubra* and other
things. Fire signs.
Saplings, perhaps 10 years -
5-7 cm. dbh. with
scattered larger trees.

Same ridge beyond trail to Austin Mt. on steep (45°) north slope thick second growth, 10-15 m. tall, 3-12 cm dbh mostly *Quercus prinus*, some *Carya*, *Acer rubrum*, *Quercus rubra*, etc. Thin undergrowth by basaltic *Kalmia*, *Hamamelis* saplings, thin ground layer of *Vaccinium myrtillus*, ferns, etc. Ferns mainly *Dryopteris marginalis* but some *Asplenium platyneuron*, *Pteridium*, very little *Polystichum*.

Farther on on w.s.w. slope, is conspicuous boulder talus, some of it open, scattered *Quercus prinus*, *Pinus strobus*, *P. virginiana*, *Acer rubrum*, *Betula lenta* clumps of *Kalmia* + *Vaccinium vacillans*. *Parthenocissus* creeping over rocks. No other herbaceous growth. Rocks lying at angle of rest, about 45°.

Habitat classification - Major - a formula including Climate, roughness, vegetation, formations,

Minor - a formula including slope, exposure, density of vegetation, rocks and drainage, etc.

Also *Prunus virginiana*, *Castanea dentata* sprouts, *Juglans nigra* (!), *Acer pennsylvanicum*

Some distance farther a similar exposure and somewhat gentler more uneven rock slope has *Pinus strobus*, *Quercus prinus*, *Castanea dentata*, and on gentler parts, solid cover of *Fragaria virginiana* and some *Amelanchier arborea*. Some *Pinus virginiana* and *Robinia*, also *Betula lenta*, *Pinus strobus* seedling, in open parts. no herbs or other small shrubs

Ridge top covered by sparse
low forest of *Quercus*
prinus with some
Carya. about 10 m. tall
trees varied in diameter
up to 25 cm.

Shrubs local, esp. in
openings; some *Prunus*,
Quercus ilicifolia

low cover of *Spiraea*
betulifolia, *Vaccinium*
vacillans

some herbs, grasses
and canes esp. in
openings.

Saddle just before Rocky Top -
open scrub of *Quercus*
ilicifolia, *Kalmia*,
+ some *Nyssa*.

thick ground cover of
Gaultheria procumbens,
Vaccinium vacillans,
Pteridium, *Myrsinaceae*,
Pereskia, etc. some
Lycopodium.

scattered pines - *P.*
rigida and *P. strobus*,
Quercus prinus, etc.

South ridge of Rocky Top
covered by pine forest
East side hardwood,
North side scattered
pines and scrub.

Pines on south ridge
really rather scattered.
Between is a scrub of
Quercus ilicifolia,
solid in places, broken
in others, with a dense
ground layer of
Vaccinium vacillans
with some *Pteridium*,
Iris cristata, *Tephrosia*
virginiana. Tangled with *Smilax*
a little *Kalmia*.
Pines rigida and *pungens*.
A few small trees of
Quercus prinus.

Some *Spiraea betulifolia*
and *Gaultheria procumbens*.

S. W. side is a tremendous
boulder talus of quartzite
locally bare, locally
covered by a sparse
growth of *Quercus prinus*,
Pinus rigida and *Betula*
lenta - undergrowth

a dense stand of
Kalmia in full flower,
some *Nyssa*, *Hamamelis*,
Acer rubrum, *Larapras*,
some *Vaccinium* scilloides,
locally *Q. ilicifolia* & *Andromeda*.
Near top on w. side
a thick wood of small
Acer rubrum, *Q. prinus*,
Larapras, *Nyssa*, etc.
little undergrowth.
A few *Cypripedium* adamsii,
Dioscorea quaternata, *Vacc.*
vacillans, *Kalmia*, etc.
Coronilla florida, *Hamamelis*, *Rhododendron*,
(*Azalea*) spp., but sparse.

On n.w. slope an open
area with dense
one high scrub of
Gaultheria procumbens,
and *Vaccinium vacillans*
with *Xerophyllum*, *Myrica* reginae,
scattered taller bushes
of *Kalmia*, *Menziesia*, &
occasional *Nyssa*,
the whole scattered
with young *Pinus*
~~P.~~ *rigida* about
3-10 m. tall

West slope of peak
beyond ~~Rocky~~ Rocky Top
is a tremendous fire
scar, covered by an
uneven scrub of
Quercus ilicifolia, *Q.*
manlandica, *Q. prinus*,
Kalmia, *Nyssa*, *Castanea*
dentata sprouts, *Robinia*
sapling, scattered
Pinus rigida up to 2 dm.
thick, bark still charred,
a dense under layer
of ~~old~~ *Gaultheria*
procumbens, *Vaccinium*
vacillans, *Menziesia*,
Pteridium, ^{Baptisia} and even
Lyonia ligustrina (rare).
The whole surface
is irregular and the
local composition varied.

26

1955 Virginia

June 4 - Sleepy Hollow,
1.5 mi. s. of Falls Church
36435 *Festuca elatior*
, open roadside in bar ground

Fairfax Co.

27

somewhat caespitose,
erect.

28 1955 Virginia

June 12 - 1/2 mi. south of entrance to Big Meadows

Skyline Drive near Tannar Ridge lookout

- 36436 ~~Gaultheria mollugo~~
2 ~~Alnus acuminata~~
small patch along roadside

June 12 - Big Meadows

in openings in scrubby growth of birch, cornus, Crataegus.

- 2 37 *Basifraga pensylvanica*.
occasional
1 38 *Maianthemum canadense*
common in shade and semi-shade
2 39 *Anemone quinquefolia* var.
common

40

June 12 - Skyline Drive

- 2 40 *Rhododendron calendulaceum*
local in oak forest
on slope

June 12 - Old Rag View

3600'

- 1 41 *Abies balsamea* L.
small group of trees on rocky place, many seedlings.
1 42 *Poa*
common on roadside

Shenandoah Nat. Park 29

perennial, not yet in flower, rhizome and roots yellow.

scape erect, peduncle very pistillate.

rhizome white, 2-3 mm. thick, brittle, with scattered very thin brownish scales.

shrub 2 m. tall; style reddish.

tree 10 m. tall, young growth blue-green, cones immature. erect, dark purple, bracts pale green.

30, 1955 Virginia

June 12

- 36443 *Convolvulus spithameus*
on open road-cut

June 12 - Skyline Drive, $\frac{1}{2}$ mi. north of Skyland entrance
44 *Iris germanica*,
on steep road-cut

June 12 - Skyline Drive, head of trail
to Shaver Hollow Shelter, Nicholson Hollow

- 36445 *Lepidium campestre* L.
roadsides

- 2 46 *Panicum werneri* Scribn.
open road cut

June 12 - Thornton River

along highway in wooded valley

- 1 47 *Tephrosia virginiana*
locally common on steep road-cut

- 2 48 *Panicum clandestinum*
occasional in grassy opening

- 1 49 *Bromus*
roadsides

- 3 50 *Pyrus*
in edge of woods

- 2 51 *Erigeron stellatus* Mill.
in woods

phen. Nat. Park

31

erect. flowers white,
stigmas obovate
whitewax.

dense colony, rhizomes
horizontal; petals and
ste strongly striped
with deep purple; staminode
and yellow, slightly
marked toward base,
pistil yellow. (July 10 - no fruit set)

erect, much branched
caespitose

3250 ft.

1150' caespitose; flowers greenish
outside, rose within.

1050'

spiny shrub 2 m. tall
sterile (others seen size
of small trees).
erect herb, rays
lavender, disk yellow-green.

32 1955 Virginia

Shen. Nat. Park
erect.

33

somewhat glaucous,
rhizome slender, ~~horizontal~~.

July 3 - north of
Tysons corner

Patch of *Pinus virginiana*
surrounded by deciduous
woods.

Piniginiana about 20 m.
tall 1.5' - 2.5 dm. dbh
spaced 2 - 5 dm. apart.
A second story about
15 m. tall of young
Liriodendron, some
reaching canopy.
3rd story of *Cornus* 3-4
~~10~~ m. tall. These
two sparse and uneven.

Ground cover of *Lonicera*,
Gaponia rather thin,
with *Rhus toxicodendron*
common. *Lycopodium*
ciliolatum occasional.
Some *Rubus*, some *Parthenocissus*,
some *Eurycoma*, *Vitis*,
a few seedlings of oak,
Acer rubrum, *Nyssa*,
Ilex opaca, *Prunus serotina*,
Carya, *Fagus*.

Some *Smilax rotundifolia*, the *Smilax*
and *Lonicera* more
common near edges of
woods.

The *Lonicera* and
Smilax tend to climb trees.

Some ivy
Dwarf ivy

July 3 - north
of Tysons Corner
mixed deciduous
woods with some
Pinus virginiana.

Largest trees are pines
and *Liriodendron* about
3 dm. dbh and 30 m. tall
these 10-20 m. apart
or more. Occasional fairly large.
Among them saplings
of varied age and size,
mostly less than 1.5 dm.
thick, including *Liri-*
dendron, *Fagus*, *Quercus*,
Carya, *Cornus florida*.

Shrub layer up to
2-3 m. tall includes
smaller saplings of trees
mentioned above, *Robinia*,
Vaccinium atrococcum,
Corylus, sprouts of
Castanea dentata, seedling
of *Nyssa*, *Rhus toxicodendron*.

Ground cover of *Mitchella*,
some *Vaccinium vacillans*,
Pernodium, *Medeola*, *Smilax*,
seedlings of *Acer rubrum*,
Vitis, ^{and} of oaks, *Nyssa*,
Smilax, *Cornus*,
Parthenocissus.

July 9 - Corbin Cabin, higher
River, Madison Co.
(Nicholson Hollow)

This is a relatively flat valley bottom which has been under cultivation in the days when the mountaineers lived in the scattered cabins which still stand in the valley.

The inhabitants were removed about 25 years ago and the forest has come back. The present forest is a mixed second growth.

- 36460 *Galium triflorum* Michx.
occasional in rather open pine woods.
- 1 61 *Anemone virginiana*
occasional in overgrown clearing in second-growth.
- 1 62 *Prunella vulgaris*
occasional in weedy clearing
- 2 63 *Asclepias tuberosa*
rare in weedy clearing
- 3 64 *Ilex verticillata* (L.) Gray
in second-growth along stream
- 2 65 *Galium circaeum*
in stony ground in second growth.
- 3 66 *Connarus altemifolia*
in second-growth woods
- 3 67 *Anemone virginiana* f. ^{repanda} ~~leucanthemoides~~
occasional in very weedy clearing

640 m. thicket of *Fraxinus*, *Robinia*, *Pinus virginiana*, *dasypetes*, *Acer rubrum*,

Clematis very abundant in weedy places and thickets

procumbent

erect, sepals greenish-white

flowers purple

flowers deep orange

- several stems from base.
shrub 3 m. tall.

- spreading.

- roots yellow

small tree 4 m. tall

- fruits green.

erect; sepals white.

38 1955 Virginia

- 36468 4 *Leonurus cardiaca*
common in clearing around
abandoned cabin
- ? 69 *Clinopodium vulgare*
in clearing near cabin
- ? 70 *Malva neglecta* Wallr.
in clearing around cabin
- ? 71 *Aquimonia*
rare along trail in woods
- ? 72 *Monarda clinopodia*
occasional in woods
- same July 10
- ? 73 *Oenothera*
common in clearing around cabin
- ? 74 *Chenopodium*
occasional in clearing
around cabin
- ? 75 *Plantago*
common around cabin
- ? 76 *Carya*
in woods along stream
- ? 77 *Phlox paniculata*
rare in weedy clearing
around cabin
- ? 78 *Hemerocallis fulva*
local, patches around
cabins

Shen. Nat. Park

39

- erect, up to 2 m. tall,
flowers purple.
- flowers bright purple
- flowers pale-lavender.
- erect, flowers orange.
- erect, flowers white.
- erect herb to 1.5 m. tall,
branched at base; flowers
clear yellow; androecia
zygomorphic.
- erect, leaves green
above, glaucous beneath.
- small tree.
- caespitose, flower
dull orange red.

July 10 -

Upper end of Nicholson Hollow
Hughes River trail above
Corbin Cabin well above Indian
second-growth woods
of oaks, maples and
birch, with scattered
large *Tsuga*. A thick
undergrowth of *Tsuga*
seedlings 2-4 m. tall
coming in locally.
General canopy rather
thin, 10-15 m. tall,
trees extremely varied
in trunk diameter up
to 25 cm., mostly under
10 cm. *Tsuga* up to 40 cm.
Old dead chestnut trunks
up to 40 cm.

Substratum of broken
rock with some soil
and a thick litter layer.
Kalmia common in
undergrowth, some
Vitis ^{viburniflora} ~~acipenserina~~, some
tree seedlings, etc.
Few herbs (*Mitchella*)
tree seedlings incl. *Carya*,
Quercus, *Acer rubrum*, *Fraxinus*
Castanea sprouts, *Acer nigrum*,
Acer pennsylvanicum.
Undergrowth 1.5-2.5 m. tall.
All of this on fairly level
ground, cut by ravines.

Walker
photos

July 10 - Skyline Drive
- many formerly
open meadows are
now covered by a scrub
of *Robinia pseudo-acacia*
from 2-4 m. tall, forming
a solid canopy. In
places this may be
varied by sumac thickets.

Other meadows are
principally invaded
by *Corylus cornuta*,
forming low dense
patches about 1 m. tall
and several to many
m. across. (Old Rag View)

Others have scattered
pines and junipers.

Still others are still
primarily grass

Bright colored flowers
are mostly in the open
grassy meadows and
especially on open road cuts.

July 10 - Big Meadow, e. of Skyline Drive, Top of Rapidan Fire Rd.

Open meadow, scattered small pines and junipers. *Centauraea maculosa* forms a belt several yards wide along both sides of road.

Some small areas of *Robinia* 1-2 m. tall.

In lowest parts are large areas, almost fields, made white (from a distance) by ~~Praecox~~ *Trautvetteria* in flower. *Dianthus barbatus* scarcely dominates other areas but ~~not~~ flowering yet. *Rubus hispida* also forms local patches in these low spots. *Ghaliictum* also common locally. Some open desiccated pools with ^{Carex} *Elychnia*, and *funeus*, as well as a *Polygonum* not yet in flower. *Rosa*, a very bispid prickly & thornless one, low 2-3 dm.

Patches of *Oenothera*

Patches of *Spiraea* about low 3-5 dm. beginning to flower.

Patches of *Pteridium*.

Patch of *Cornus foemina* and some *Crataegus* & *Spirea*, 1-2 m tall.

few *Rubus*
v. or retic.
with needles
no flowers

few *Pteridium*
open to sun
over rocks
soil poor

On higher ground *Chrysanthemum leucanthemum* is locally common.

Patches of very low *Crataegus*, also of *Rubus flagellaria*. Low patches of *Prunus virginiana*, about 2 m. tall, surrounded by a belt of spreading *Rubus flagellaria*.

Grassy areas with abundant *Tragaria*, but little ~~or~~ *Vaccinium* except in a few local patches. Low patches of *Corylus*, with running underground stolons, the stems only 1-2 dm. tall, both smooth and very glandular forms. No fruit? Patches of *Pennstaedtia*. The grassy places with *Dianthus*, *Agrostis*, *Carex*, *Pyrus (aronia)* with the *Corylus*. Some *Lyonia*, *Asclepias syriacus*, *Cirsium (long)*, *Lysimachia quadrifolia*, *Solidago*.

Large spots of *Polytrichum* commune partly dead.

Low patches of *Rubus (argentea?) primocanes*. *Lycopodium complanatum*.

Achillea

Leptandra

Thlaspi
arvense

Anemone
quinquefolia

44 1945 Virginia

July 10 Rappahannock River
 River-line right-of-way
 has thick growth of sprouts
 of Sassafras, Robinia,
Pteridodendron, Nyssa, etc.
 Forest here is largely *Pteridodendron*.

- 1 July 10 - Stony Man Mountain
 Overlooks, Skyline Drive
 Grassy roadside
 36479 Galium mollugo L.
 3 one clump seen on
 2 80 Carex
 common on

- 3 81 July 10 Old Rag View
 Corylus cornuta
 forming ~~is~~ patches in
 meadow

- 1 July 10 ½ mile south of
 Big Meadows entrance,
 Skyline Drive
 82 Galium mollugo L.
 grassy roadside

- 2 July 9 - The Pinnacles Overlook
 Skyline Drive

- 3 83 Asclepias tuberosa
 roadside

- 3 July 9 - Thornton River
 84 Campsis radicans
 roadside thicket

Elk Knob Park

45

caespitose; flowers white.
 caespitose, culms
 spreading.

1110m
 shrub, n. tall.

1050m
 caespitose, stems
 decumbent to ascending,
 flowers white (same
 clump as #)

3320'
 1050m. flowers orange

wine climbing in bushes,
 flowers deep orange red. Stigmas

July 12 - Fat Buffalo,
(7 corners), south of Falls
Church.

A strip about 30 m wide
and perhaps ~~200~~ 300 m.
long of thick oak forest
was cut at about
1 m. height from the ground.
The forest ~~is~~ was about
~~20-25~~ ^{2m} feet tall, trees
3-8 m. apart, up to an
extreme of 55 cm. thick.

The tops of the stumps of
60 trees were measured,
mostly *Quercus rubra*,
Q. coccinea, etc. Measure-
ments in inches diameter.
Rings were counted.

Accuracy probable to within
± 2 rings, possible error
due to some rings being very
small. Measurement
was total diameter incl. bark.

Table on p. 47 arranged along
the strip from east to west.

Clear indication that
there is no relation between
diameter and ~~age~~ age.

This forest is about 50
years old, except the east
end which is between 18+30
years and mixed in composition.
No regular pattern of ring
width variation. Some trees

diam.	rings	tree	diam.	rings	tree
9 1/2"	20	tulip	13 "	48	oak
13 "	18	"	7 1/2"	40	"
11 "	20	oak	10 "	48	"
14 "	29	locust	17 1/2"	49	"
10 "	24	red maple	15 "	45	"
19 "	20	oak	9 "	40	"
10 1/2"	26	"	14 "	47	"
9 1/2"	26	locust	13 "	49	"
21 "	50-52	oak	18 "	49	"
22 "	49	"	12 "	52?	"
10 1/2"	45	"	11 "	41?	"
13 "	44-45	"	9 "	50	"
19 1/2"	50	"	9 1/2"	47	"
19 1/2"	50	"	12 "	47	"
10 "	47	mixed?	13 "	47	"
12 "	41	oak	11 1/2"	46	"
13 "	49	"	12 "	47	"
15 1/2"	51	"	10 "	45	"
8 1/2"	50	"	16 "	48	"
14 "	46	"	16 "	48	"
13 "	49	"	18 1/2"	44	"
12 "	46	"	12 "	43	"
10 "	48	"	8 1/2"	46	"
9 1/2"	45	"	14 1/2"	44	"
10 1/2"	42	"	19 "	44	"
17 1/2"	49	"	11 1/2"	46	"
9 "	48	"	22 "	47	"
6 1/2"	43	"	have a narrow		
13 "	48	"	period about 2/3		
15 1/2"	47	"	from center to margin,		
10 1/2"	50	"	others more or less		
7 "	44	"	equal, others very		
17 1/2"	38	"	narrow in outer ind.		

48

1955 Virginia

July 18 - Sleepy Hollow
1 mi. S. of Falls Church
Planted in garden,
reproducing spontaneously

36485 Monarda

2 86 Monarda

July 16 -

1 87 Goodyera pubescens
occasional in young
pine forest

July 28 -

88 Pyrola

mixed second growth woods

89 Cuscuta

parasitic on various weeds
in recently abandoned corn field.

90a Glycine

occasional to common in stubble field

91a Glycine

occasional to common in stubble field

Fairfax Co.

49

erect; flowers bright
- deep maroon-purple.
erect; flowers bright
red.

erect; leaves gray-green
with white veins; flowers white.

stems pale yellow,
flowers white.

flowers rose-purple.

flowers white

July 9, 16, 23, 30 - Area west of Potomac River in area of Great Falls and ~~Government Dam~~ State ~~Carolina~~ Reservoir covered by S.C.S. air photo DUB-3M-69, lying between river and Old Georgetown Pike and to the west of the Pike.

The area is a mosaic of cultivated fields, pastures, abandoned fields and pastures, deciduous woods of varied age and composition and *Pinus virginiana* woods of varied age and amount of admixture with other things. The outlines of patches of different forest types especially of the pine, in many places suggest that they came in on old fields which have been abandoned.

Unfortunately much of this land is being sold for lots and houses are being built on them.

The face of this area will change rapidly and the principal value any observations will have is as records of what was there in the summer of 1955.

Notes are arranged by numbers as marked on overlay in red, each number indicating a plot or area that seems on the photo to be more or less uniform.

1) Open field, grassy, *Tridens flavus* and *Lespidea striata* the most important component. Several small clumps of oaks scattered in the field. Was cleared from scrub pine forest and planted to grass, according to owner, who was mowing it at the time. Grass 15-20 cm. tall.

2) a) area of abandoned field near road with abundant invasion by shrubs such as *Rhus copallina* and tree seedlings, esp. *Prunus serotina*.

b) young pine forest, *P. virginiana*, with pine saplings very closely spaced, about 2.5 m. apart or less, 6-10 m. tall, canopy incomplete because

of narrowness of crown
some grass and a little
Lonicera japonica in
ground cover. Seedlings
of hardwoods - *Acer rubrum*,
Quercus spp., *Prunus*
serotina, etc. Interrupted
second story of *Cornus florida*.

In open places dense
ground cover of *Andropogon*
virginicus, *Rhus*, *Vaccinium*
stamineum, young pines,
etc.

In parts the pine is
sparse, evidently an old
~~pasture~~ pasture. The spaces
between the pines are
being filled with saplings,
also largely pine.

3.) Open ground around farm
house.

4) Forest of *Pinus virginiana*
with some *Robinia pseudoacacia*
about 65 ft. tall. Rather
open forest with no irregular
canopy, trees 3-5 m. apart.
Second story of *Cornus florida* with saplings

of such trees as red
maple, *Zagus grandifolia*,
a little *Ilex opaca*, etc.

Ground cover primarily
Lonicera japonica,
with some *Campsis radicans*,
Parthenocissus quinquefolia,
Vitis sp., *Smilax*, etc. This
~~in thin places~~ all tending
to climb trees but
principally forming
a mat on the ground.

In thin places some
Lycopodium complanatum,
Goodenia, *Mitchella*,
'seedlings' of hardwood trees.

5) Irregular forest,
mostly hardwood, a
few pines among scattered
larger trees, much
younger growth. In
this young growth are
Cornus florida, *Ilex opaca*,
and saplings of *Carya*,
Quercus alba, f. *velutina*,
Nyssa sylvatica, etc.
This growth of saplings
very dense where the
taller trees are sparse,
more open where they are
close. Some *Aralia spinosa*
and *Juniperus virginiana*.

On ground are *Lycopodium complanatum*, seedlings of *Quercus*, *Carya*, *Acer rubrum* but ground cover is very sparse.

This section merges into area no. 4.

9 Pasture of grass mainly of *Digitaria*, with scattered other plants.

7 Small ravine with mixed thicket of deciduous shrubs and small trees - *Cornus florida*, *Prunus*, *Acer rubrum*, *Quercus falcata*, *Diospyros virginiana*, *Phunus serotina*, and a few small *Pinus virginiana*. Dense undergrowth tangled with *Lonicera* and *Vitis*.

8 Pasture of mixed grasses, some *Digitaria* mostly *Agrostis alba* recently mowed.

9 Alfalfa field recently mowed.

10 Sparse forest, mainly of oaks in upper story, but with some pine locally.

Second story dense in place, of *Cornus florida*, *Nyssa sylvatica*, *Acer rubrum*, oak saplings.

Ground cover sparse, some *Vaccinium*, *Vitis*, seedlings of oaks, *Carya*, *Sassafras*, sprouts of *Castanea*.

11. An abandoned field, mainly covered by *Andropogon*. Divided by small road. On one side of road some invasion by seedlings of pine, sumac and a few oaks. *Andropogon* dominant.

On east side of road the grass has been mainly replaced by *Foliotago*. Invasion by woody plants more prominent - pine, locust, sumac, *Sassafras*, etc.

Strip along edge of forest has little open ground left and saplings are quite tall.

12) Patch of young
Pinus virginiana west of
 field (11). Edges toward field
 and road are thick
 stands of esp. smaller
 pines 2-3 m. tall. Beech
 with grassy ground cover.

13) Tall mixed forest,
 locally deciduous locables
 with some pines. Some
 of trees very tall, over 100'.
 This is an old pine stand
 gradually being replaced
 by deciduous trees, especially
 oaks, some beech and
 other trees forming an
 important second story.
 Little ground cover - a few
 tree seedlings and some
Hypopodium complanatum.
 The pines are on higher
 spot, lower are pure
 hardwood - very uneven,
 some large trees. ~~possibly~~
~~possibly~~

14a) Deciduous forest
 with some pines - otherwise
 oaks. *Prunus serotina*,
 some *Acer rubrum*. On
 the edge this is very
 dense and the trees are
 fair sized. Inside the
 large trees have been
 lodged out - principally
 pine judging from
 stumps. Much of
 the interior is a
 low thicket of saplings
 of *Cornus florida*, *Prunus*
serotina, *Rhus*, *Acer*
rubrum, *Nyssa*, etc.
 1-2" diam. less than 20' tall.
 The *Cornus* and *Prunus*
 are dominant. Undergrowth
 of *Viburnum*, some
Ilex opaca and chestnut
 sprouts. *Rhus toxicodendron*
 common near edge.
 Ground cover varied local,
Mitchella, a few ferns,
 seedlings of trees.

This stand appears
 rather the same age.
 Perhaps was burned
 after logging. Farther
 in some *Fagus*, a few
 large trees, seedlings
 of oaks, hickory, sassafras,
Elaeagnus americanus.

14 b) Changes to predominately pine forest (*P. virginiana* but a few *P. rigida*).

Almost complete second story, uneven in height of saplings of tulip and hickory, with *Cornus florida*.

Pine stand rather sparse, canopy open, tree measured about 9 $\frac{1}{2}$ ' tall.

Shrubs of *Ilex opaca*, chestnut sprouts, seedling of deciduous trees, much little *Lycopodium complanatum* humus forming ground cover.

More southward the second story and ground cover become very sparse, forest is open, some large tulip trees.

15) Abrupt change to almost pure pine forest with a thin second story of *Cornus florida*; pines rather even in height. Very low sparse ground cover. Humus very thin, but no fire scars on trees.

Old small clearing with young pines, tangled with *Smilacina glabra*.

oaks, locust, sassafras, *Brunnus serotina*, very thick but low.

16) recently abandoned corn field, corn stalks not entirely rotted away. Apparently abandoned last year as there is a dense layer of *Plantago virginiana* dry from last year and a thriving layer of living *Equisetum arvense*, *Ambrosia artemisiifolia*, *Oenothera biennis*, *Coumza canadensis* and *Dianthus barbatus* about 1 m. or less tall. *Euphorbia corollata* rare.

17) Very uneven forest mainly oaks and hickory. A scattering of very large oaks and tulips 100' tall. Canopy not continuous. Under story continuous, of *Cornus florida*, *Nyssa*, oak and hickory saplings. Little ground cover.

Forest thicker, mainly oaks toward road. Eastward forest gets lighter less tall, mostly oak.

hickory, occasional tulip, second story of saplings of same. Sparse undergrowth with vines.

18)

19) Fairly close stand of pines forming a roughly rectangular patch surrounded by deciduous forest - probably site of an old field. Pines (*P. virginiana*) 75-100' tall, well developed understory of *Liriodendron*, *Acer*, *Ilex*, *Carya*, *Coronis florida*, with much *Lonicera japonica*, *Rhus toxicodendron*, etc. Little ground cover, some *Lycopodium complanatum*.

20) Irregular occurrence on slightly higher ground of tall pines - many of them fallen or dying, mixed with other trees of various sizes. Pines being replaced. Undergrowth of saplings of beech, *Nyssa*, bushes of *Vaccinium stamineum*, saplings also of sassafras and sprouts of chestnut. A few large trees in place, with second story of *Coronis florida*, oaks, *Nyssa*, *Carya*, basswood, *Juniperus*,

sprouts of chestnut,
toward road some large
oaks, tulip, lots of ferns.
Another side of road
a rather sparse stand
almost pure oak - in
somewhat a blanket
of *Lonicera japonica*.

23) Irregular stand of
large oaks and Hickory,
no large beech, ground
cover very sparse, second
story uneven. An
opening with seedling
of oaks, tulip, larch,
sprouts of *Castanea*, under-
growth of *Gaultheria*
and *Vitis*.

Locally there has been
a ground fire. Here are
oaks, tulip, some hickory
100' tall. A little peach.
Understory sparse, very
little undergrowth.

22 Stubble field with
Hedysarum and *Glycine*
probably planted for
green-manure or pasture.

23) Irregular forest,
rather open, mainly
Sinodendron & *Acer rubrum*.
Undergrowth of saplings
and *Lindera* almost
smothered by *Lonicera*
japonica.

24 Pasture with scattered
trees, mowed.

24 Unmowed part with
mostly *Holodiscus*, seedling
of tree - Robinia, *Quercus*,
Passiflora, *Diospyros*.

26 (milled)

27) Rather sparse and uneven
stand of fairly mature
pines with an admixture
of *Quercus falcata* - incomplete
canopy about 75' tall
second story ~~to~~ rather
well developed but uneven,
of *Cornus florida* and
saplings of oak, tulip,
taurus, a few Robinia.

Shrub layer of *Vaccinium stamineum*
and small saplings of trees.
Ground cover almost solid carpet
of *Lycopodium complanatum* with

seedling of oaks, hickories,
Cornus florida.

28 somewhat denser
pine stand with a few
Quercus falcata. Canopy
still sparse.

Second story about as
in 27, with *Cornus*,
tulip, red maple, beech,
- few hickory saplings.

Ground cover very sparse,
very little *Lycopodium*,
some ferns, *Goodyera*,

Mitchella, tree seedlings.
Many pines dead.
dense shrub growth in
openings left by dying pines.

29 Stand of pine of uneven
age - has been open
with scattered trees, as
some large pines have
well developed lower
limbs, now dead.

Second story of beech,
tulip, *Cornus*, locust.
Ground cover of *Lycopodium*
complanatum.

Occasional patches of
Lonicera japonica. Occasional
saplings of oak, hickory, tulip,
sassafras. Clump of *Aleurites*
where no water evident.

30) Sharp boundary ^{upper}
between this and 29.

Forest of mainly hickory,
oaks, ~~hickory~~ beech, *Acer*,
Rubium, small hickories,
a few pines.

Thin understory of
saplings of same trees
(except pines) with *Nyssa*
and some *Cornus*. Some
small *Juniperus*.

Tree layer of *Gaultheria*
and *Vaccinium* rather
local, seedlings of trees
are quite sparse.

Abundant stumps of
Castanea.

Much *Fagus* and small
Nyssa here.

Ground cover sparse,
of *Vaccinium vaillantii*,
Parthenocissus, tree
seedlings or root sprouts
this drops out in low
places.

Chestnut has evidently
been cut here after
it died.

31 (omitted)

32) *Quercus falcata* and *Q. coccinea* - ^{mostly} a few large trees up to 2' diameter. mostly much smaller. Some small hickory in top story, more in second story which is extremely sparse. Very little herb ground cover, only irregular scattering of small shrubs and tree seedlings hickory, tulip, oak, some maple and sassafras. *Vitis*, *Parthenocissus*, *Rubus*, a few *Lindera*, *Smilax*. Much litter exposed because ground cover so sparse.

32a) lower ground - *Ciriodendron* becomes abundant, some oaks, hickory, locally *Juglans nigra*. Canopy quite thick. Some trees quite large, over 50cm. diam. Second story largely *Coronus florida*, shrub layer abundantly of *Lindera benzoin*. Ground cover mostly a blanket of *Soniceros japonica*, locally ferns, these in places abundant.

Phragma rare here. This type occupies bottom land of small meandering streams.

32b) thin oak forest with second story of *Coronus*, undergrowth of *Acer rubrum* and *Carya* saplings, this sparse.

33) sparse irregular patch of pine, many fallen. Second story of *Coronus*, sassafras, *Fagus*, *Acer rubrum*, ground cover of *Lycopodium*, *Lindera*, *Parthenocissus*, *Rhus toxicodendron*, tree seedlings.

33a) On both sides of road on little rise - dense rather even stand of pine about 60' tall. (Abundant seedling pine to 3 years old on road cut.) Second story thick but uneven - *Coronus* with saplings of *Acer rubrum*, oaks, *Fagus*, some *Mrysia*, tulip, chestnut sprouts. Very little ground cover.

Aug. 23 - estuary west
of Joe Dyer's Point

slope of low knoll

just above salt marsh

36490 *Aster macrophyllus* var. *sejunctus*
forming a dense ^{purple} ground cover in aspen

grove, mainly of sterile rosettes
on ^{bare} eroded ~~the~~ ground

2 92 *Aster umbellatus* Mill.
common

2 93 *Euthamia graminifolia* var. *nuttallii*
common

same - at high tide
level in edges of salt-marsh

3 94 *Stellaria graminea*
very local

1 95 *Hypoxis canadensis*
restricted narrowly to
upper edge of ~~area~~ area
covered by tidal water.

2 96 *Plantago maritima*
very common

2 97 *Triglochin maritima*
common

4. 98 *Spartina patens*
very local

~~petals~~ rhizomes prostrate
subterranean, fertile
stems erect, disk yellow
rays pale lavender,
ect flowers white
with yellow eye ~~in lower lip~~
and upper lip dark-marked
inside.

ect; rays white, disk
yellow.
flowers yellow

procumbent, petals
white, bifid.
leaves fleshy; flower
straw-white.

leaves stiffish, somewhat
~~fleshy~~ fleshy, plants
varying much in size.
caespitose, spikes erect.

rhizomes form a dense sod.

70

1955 Maine

- 36499 *Suaeda maritima* (Ait.) Gray.
common
- 36500 *halicornia europaea* L.
local
- 3 01 *Cyperus fluviatilis* (Torn.) Gray
forming dense patch
- 2 02 *Juncus*
common
- 4 03 *Limonium nashii* Small
common

" same - mud flats below
high tide level.

4 04 *Spartina alterniflora* Loisel.
abundant, pure
stands ~~are~~ overlarge area
practically submerged
at high tides.

" Aug. 24 - Milbridge,

- 36505 *Veronica longifolia* L.
persisting around old
house-site

Washington Co.

71

~~tree~~ erect; leaves fleshy
stems terete, fleshy,
red to green
rhizomes horizontal,
subterranean,
caespitose
corollas lavender.

erect,

erect, branched at base
flowers blue-violet.

Aug. 23 - West of Cherryfield
(bet. Cherryfield & ~~Woodstock~~ (Twp. 10))
Low hills of granite
which have been burned
about 2 years ago. Most
of trees were killed - a
few small *Quercus rubra*
etc. surviving, some
Q. rubra many *Betula*, ^{and} *Populus*
~~adrietum~~ sprouting from root crowns.
Ground cover of *Vaccinium*
(*V. angustifolium*?), *Deschampsia*,
Pteridium, etc. Being
extensively invaded by
Myrica peregrina, *Rhus*
typhina, *Spiraea*, some
Rubus (*Rubatus*), some *Dierville*,
Gaultheria, etc.

Now open enough to be
traversed in any direction

Aug. 24 Salmon Pond, s. of
Turk Mt., 8 mi. w. of Cherryfield
Slopes of about 30° down
to lake. Covered by rather
dense wood of *Betula*
papyrifera, *Betula*, *Picea*,
Abies, *Acer rubrum*, etc.
Dense ground layer of
Vaccinium angustifolium,
Gaultheria procumbens,
Pteridium, *Analis nudicaulis*,
with *Cladonia* and
mosses thickly covering

285'

rocks and bare spots.
Scattered shrub
layer of *Vaccinium*,
Empetrum, *Alnus*,
Flex, etc. getting
thicker toward the
lake margin.薄
peat on the ground.
Pinus strobus and
Picea seedlings as
well as those of
~~deciduous~~ maples,
oaks, etc. in shade

Forest varies locally
in dominants.
Around the lake *Alnus*,
Myrica gale, *Rhododendron*
sp. are abundant.

Some *Tsuga* very locally,
with *Pyrola* on roots.
Acer pensylvanicum
Viburnum alnifolium,
etc. in undergrowth.

Aug. 26 Spring River lake 20'

Aug. 24 - Hill north of ~~Little~~
~~Long Pond~~ Spring River Lake -
 8 mi. west of Cherryfield
 Bare open rounded granite
 slopes with patches
 of vegetation - *Vaccinium angustifolium*,
Jaylussacia, *Erythronium*,
Glycyrrhiza leonocarpa,
Juniperus communis,
Dianthus, *Cladonia*,
 growing in crevices
 and on places where
 grit and humus have
 accumulated and been
 stabilized by mosses.
 Some small *Betula populifolia*,
Myrica peregrina. Wind
 beaten pines and *Pinus strobus*.

Aug. 24 - west end of Spring River Lake, 8 mi. w. of Cherryfield
 beach of fine gravel 200' 5 m.

36506 *Alnus rugosa* var. *americana*
 important component of scrub
 at top of beach

1 07 *Ranunculus reptans*
 rare, above water level

1 08 *Veronica scutellata*
 above water level

1 09 *Galium bimaculatum*
 above water level

1 same - delta of fine wet sand,
 10 *Utricularia cornuta*

Aug. 24 - Spring River Lake -
 west end surrounded
 by mixed forest of red
 maple, *Thuja*, *Abies*,
Betula on flat ground
 on both sides of small
 stream. Mouth of stream
 forms a delta of fine
 sand. The landward
 part is dry and covered
 by a broken scrub of *Myrica*
gale. The stream margin
 and lobes extending into the
 lake are wet, covered by
 a mixture of a sterile grass,
 several sedges, *Drosera*,
Xyris, *Eriocaulon*, with a
 patch of low *Myrica gale*
 in the center of no lobe.

shrub 2.5 m. tall; leaves
 glaucous beneath.

prostrate, flowers yellow.

flowers lavender.

prostrate

erect, flowers bright yellow.

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- 36511 *Xyris montana*
common
- 12 *Drosera intermedia*
abundant
- 13 *Eriocaulon septangulare*
abundant
- 14 *Fimbristylis autumnalis*,
very rare
- 15 *Cyperus*
common
same - in scrub at top of beach
- 16 *Chamaedaphne calyculata* (L.) Moench
occasional
- 17 ~~*Pemopanthus mucronatus*~~
~~*Phenax ciliolatus*~~
common
- 18 *Thuja occidentalis*
common

Aug. 24 - Hill north of west end of Spring River Lake
bare granite exposure
near top

- 19 *Betula*
isolated, wind-beaten on
- 20 *Pyrus melanocarpa* (Michx.) Willd.
on thin grit accumulation
in depression on slope.
- 21 *Potentilla tridentata* Ait.
on thin grit accumulation
on slope
- 22 *Lechea*
on thin grit accumulation
on slope

Hancock Co.

77

- leaves distichous; flowers yellow.
- plant dark reddish.
- plants, solitary
- plants, solitary
- shrub (m. tall)
- shrub, - 2 m. tall, fruit dull red, unpleasantly bitter.
- small tree 5 m. tall, very bushy.

Aug. 24

- tree 2 m. tall, bark reddish.
- prostrate; fruit black.

- same - flat top
 36523 *Mystrovia peregrina*
 abundant in openings
 on thin soil.
- 1 24 *Pinus resinosa* Ait.
 common in sparse woods
- 4 25 *Betula populifolia*
~~Aug. 24~~ in sparse wood
 wooded
 same - north slope
- 3 26 *Monotropa uniflora*
 in deep humus, local
- 1 27 *Lycopodium obscurum*
 in thick woods, deep humus
- 2 28 *Chimaphila umbellata*
 in deep humus in thick woods

Aug. 24 - Salmon Pond,
 south of Trunks Mt., 8 mi.
 w. of Cherryfield.
 Thick woods at edge
 of pond.

- 29 *Viburnum alnifolium* Marsh.
 occasional in ~~woods~~
- 30 *Vaccinium corymbosum*
 occasional in
- 31 *Gaylussacia*
 occasional in
- 32 *Rhododendron canadense*
 common, especially at lake
 margin
- 33 *Pyrola secunda* L.
 very local, under *Tsuga canadensis*
 on slopes.

shrub 0.5 m. tall, very
 fragrant when bruised.

small tree 2 m. tall,
 bark pale.

10 m.

whole plant pure
 white except yellowanthers.

leaves glossy, scapes erect.

- shrub 2 m. tall; fruit
 - not quite mature, orange-red.
- shrub 2 m. tall; fruit
 - blue, sweet.
- shrub 1 m. tall, fruit
 - black, sweet.
- shrub, m. tall; leaves
 glaucous, especially
 beneath.
- resems definitely secund.

Aug. 25 - Bois Bubert Island.

The island is generally low, rolling, of glacially worn granite. It is mostly covered by a low wood of mixed Spruce, fir, birch and alder, with some *Laurus*. This is of uneven stature, rather sparse so ~~trees are~~ branched to base in many places.

Young trees, mostly spruce, and *Alnus* fill many of the spaces where the forest is rather sparse. General ground cover of *Circaea*, pure stands locally of *Vaccinium angustifolium* and *V. uva-ursi*, ~~but~~ *Erythronium* *nigrum*, *Gaylussacia baccata*, etc. *Kalmia angustifolia*

Upper parts of low hills generally open bare rock, covered with *Cladonia*, patches of *Vaccinium angustifolium* and *V. uva-ursi*, *Gaylussacia baccata*, & a little scattered *Myrica peregrina*.

Openings separated by patches of *Alnus* - mostly one with rusty

pubescence, but some with leaves glaucous beneath.

Pond in interior of island has

Aug. 25 - Bois Brûlé Island
south of Millbridge

- 36534 *Cuscuta*
4 parasitic on *Lolium*
semipervirens just above beach.
- 2 35 *Alnus rugosa* f. *emersoniana*
common forming thickets
over most of the island.
- 2 36 *Erythronium* *nigrum*
common locally in
openings and thin woods.
- 3 37 *Alnus rugosa* f. *emersoniana*
common, forming thickets
and undergrowth.
- 28 same - on submerged
~~rhizomes~~ mat of *Nymphaea*
~~bordering~~ pond
- 2 38 *Eriocaulon septangulare* Will.
rosette submerged, heads
above water, in patches
near shore.
- 1 39 *Nymphaea odorata*
in water, forming a
zone 50-100 m. wide around
pond.
- 1 40 *Nymphoides cordata*
local near shore,
growing on
- 1 41 *Eriocaulon septangulare*
local on raised places in
mat, rosettes at water's surface

- ~~10~~
stem orange flowers
white.
- ~~11~~
shrub 2.5 m. tall.
pubescence yellowish,
leaves green beneath
- ~~12~~
~~13~~
prostrate, forming
mats. fruit dull black
fleshy but not agreeable
to taste.
- ~~14~~
~~15~~
shrub 2-3 m. tall.
pubescence yellowish,
leaves green beneath.
- ~~16~~
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heads gray; roots
septate
- ~~19~~
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84 1955 Mains

✓ Aug. 26 Joe Dyer's Point
5 mi. south of Millbridge
spruce forest with
deep raw humus over
rocks, just back of
rocky shore.

36542 *Trientalis borealis*

common in shade

1 43 *Vaccinium vitis-idaea* var. min.
common generally in shade

2 44 *Vaccinium canadense*
in spruce forest

2 45 *Vaccinium angustifolium*
in opening (old burn)

same - sandy patches
at top of boulder beach

✓ 46 *Mertensia maritima*
common in

3 47 *Atriplex patula* var. *hastata*
common in

✓ 48 *Convolvulus sepium* var. *repens* (L.) Gray
common in

49 *Atriplex glabriuscula* Edm. ?
very common in

Washington Co.

85

leaves glossy; fruit
scarlet, acid, excellent
cooked with sugar.
shrub 3-4 dm. tall,
fruit blue, sweet.
fruit blue, sweet.

prostrate, many branches,
spreading from root crown,
form mat-like patches
up to 1 m. across; leaves
very glaucous, flowers
~~pinkish~~ bluish turning
pink.

spreading, much
branched, green.
twining over other
plants and creeping
on sand; flowers with
limb pink, never
white; stigmas oblong, 2. white.
plant prostrate, spreading,
much branched; whitish green.

86

1955 Maine

36550 *Elymus*

occasional in

51 *Lathyrus maritimus*
common in52 *Chenopodium*

rare in

53 *Ammophila* ^{beryllicula} ~~aeruginosa~~
common, ^{forming} ~~forming~~ patches in54 *Chenopodium*

rare in

55 *Sentellaria epilobiifolia*
occasional in56 *Stachys*
common in57 *Muhlenbergia*?
rare in

Aug. 27 - same

58 *Spiraea*

edge of forest at top of beach

59 *Cornus canadensis* L.
abundant in spruce
forest growing on deep humus

Washington Co.

87

erect, green.

forming tangled masses

erect, bushy, somewhat
glaucous, ill-scented.
erecterect, bushy, somewhat
glaucous

erect, flowers bluish.

flowers pink

erect, leaves glaucous.

shrub 1 m. tall, flowers
pinkish white

fruit scarlet.

Maine
west side of

Aug. 29 - Webb Lake, n.e. of
~~Campground~~
~~out of~~ Blue Mt. State Park
second-growth woods
of *Betula lutea* and
Acer rubrum, undergrowth
of *Abies*, saplings.

34560 *Lycopodium clavatum*
common in shade

2461 *Lycopodium sibiraeformis* Willd.
common in shade

Ground cover of *Aralia*,
Lycopodium, *Cornus canadensis*,
Pteridium, *Acer nigrum*
seedlings, etc. Lichens *Tomentaria*,
Clintonia.

creeping fruiting
stems erect.

creeping with erect
branching secondary
stems.

Aug. 28 - Shelburne,
Androscoggin River,
Mixed forest of beech,
birch, hemlock, spruce,
white pine on rocky slope.

- 36562 *Lycopodium complanatum*
common in shade
- 2 63 *Lycopodium obscurum*
local in shade
- 2 64 *Fagus grandifolia*
~~common~~
- 1 65 *Betula papyrifera*
~~common~~
- 3 66 *Betula papyrifera*
common

Aug. 28 - ~~Ellis River south of~~
Pinkham's Notch, above Glen Ellis 1550'

- Low forest, mixed *Betula*,
Picea, *Acer*.
- 6 67 *Betula papyrifera*
common

The general forest cover at lower altitudes in the White Mts. is a general混生 mixture of *Betula papyrifera*, *B. lutea*, *Acer rubrum*, *A. spicatum*, *Fagus grandifolia*, *Abies balsamea*, *Tsuga canadensis*, *Pinus strobus*, *Picea rubens*, etc.

creeping rhizome on top
of ground branches erect.
rhizome deeply buried
stems erect.
small tree 5 m. tall 10 cm.
diam. (others much larger)
tree 12 cm. diam., bark
white to base.
tree 20 cm. diam. bark
white to base.

photos of mts. ~~at~~ Madison Adams, -
Jefferson (+ Great Gulf), Washington
from n. of Pinkham's Notch,
Washington ~~for~~ + Franklin pen
s. of P.M.

Tree, several trunks from
base, largest 20 cm. diam.
bark white to base.

It seems to extend upward, becoming more coniferous, to a timber line at perhaps 5500'. Most of the peaks are wooded to the tops. Mt. Washington has an extensive area above timber-line, mostly covered by broken rock.

left. 2 - Road north from Lansing to Pontiac Lake - first 3/4 miles is glaciated country, mainly forest land. occasional spot of wood, scattered trees, fence rows etc. sandy soil made in low spots.

Transitional area apparently much of it abandoned fields with principally a low scrub of *Comptonia peregrina*, patches of *Pteridium*, areas of aspen thicket - these becoming more general northward, result of cutting and burning. Deer browse on aspen seedlings and lower branches.

North of this a conspicuous belt of pine-oak - both *Pinus strobus* and *P. resinosa* and several oaks. Fairly closed forest though not old.

North of this, again, a mosaic of patches of aspen forest, *Thuja* swamp and open heathy-like areas of *Comptonia peregrina* and *Pteridium* with

scattered trees.

Stop. 1 - Deer and rabbit exposure in degraded *Thuja* swamp. This is a wet peaty spot with thickets of *Thuja*, *Alnus*, *Betula merna* and various other less prominent small trees & shrubs.

This was logged over about 75 years ago and all big timber removed. The *Thuja* is mostly under 75 years old but some up to 175, but all small. Some very small cedars, an inch or so diam. may be very old. Waving vaguely ascribed to fire, etc. but no satisfactory reason given.

Originally this was predominantly *Thuja* with some *Cedrus* and *Abies*.

Deer "yard" here in winter when snow is 15" or more deep, eat low *Thuja* branches and shoots above snow line. Also eat various other things but *Thuja* and *Tamias* are preferred, also *Corvus cornix*.

Exposure in 25 years has not made conspicuous difference yet except to increase deer winter shoots.

Higgins Lake Conservation
~~Training~~ Training School

Lake with narrow sand beach, then surrounded by a broad strip of swampy forest - this has a peat layer, apparently shallow. The swamp is mainly *Thuja* with *Tsuga*, *Abies*, *Betula papyrifera*, *B. lutea* - these birches more abundant toward lake and toward periphery, with some *Acer nigrum*. In the cedar and hemlock are thick there is almost no ground cover. Here the cedar layers conspicuously where it falls or grows down to the ground. Where the cedar and *Tsuga* are thick the ground cover is almost absent. Where birch is common *Aster macrophylla*, *Maianthemum*, *Pteridium*, *Aralia*, *Gaultheria*, *Polygonatum*, *Trollius*, *Actaea*, *Dryopteris austriaca*, seedlings of *Abies*, *Quercus*, *Acer nigrum*, *A. spicata*, *Ulmus*, *Thuya*, etc. and such shrubs as *Amelanchier*, *Acer spicata*, etc.

This is surrounded by second-growth of oak, birch, and aspen.

Deer browsed northern white cedar forest.

This is a great swamp with *Thuja*, *Picea*, *Abies*, *Betula populifolia*, and *Populus*. The trees are up to 2 dm. ~~dbh~~ dbh, spaced 1-3 m., forming a dense shade. They are browsed off to about 2 m. showing a definite "browse line".

This is a "deer yard" and lacks shrub undergrowth. There is a thin ground layer of *Clintonia*, *Coptis*, *Galium triflorum*, *Viola* spp., *Asarum canadense*, *Linnæa*, *Maianthemum*, *Rubus* spp., *Willow* spp., *Hydrophyllum*, *Cornus canadensis*, *Equisetum* spp., *Carex intumescens*, *Hydroponium*, *Thelypteris palustris*, *Aralia nudicaulis*, *Carex stellata*, *Ronicera canadensis*, and seedlings of *Acer rubrum* and *Abies*.

The deer prefer the *Thuja* and, in fact, it and *Taunus* are the plants on which they can live over the winter exclusively.

Left. 3 Miller's Landing
Dead stream

Large wilderness area
of about 70,000 acres, with
river dammed up to flood
about 2000 acres. This has
been flooded about 15 years
and the water level is
maintained within 3 inches.

The depth of water
varies locally. Where it
is about 1 m. there is a
thick growth of *Myriophyllum*,
Calandra, *Eclipta*, *Potamogeton*
americanum, other *Potamogeton*,
Ceratophyllum, *Nuphar*,
Nymphaea, etc.

Where water is 2-3 m.
Ceratophyllum is
more abundant, also
Potamogeton zosteriformis
and *P. illinoensis*, some
Bidens beckii, an alga,
probably *Spirogyra*.

Much local variation
in abundance and in
proportion of different
species. The bottom is
generally, but not
always completely, covered.
Sparaganium and
Tallissimia are locally
abundant. A sterile
Sparaganium(?) ~~forsteri~~

which is emergent
forms a crooked line
which probably marks
the old stream margin.

Occasional dense patches
of *Pontederia*. A few
patches of *Typha*.

Large areas of dead
trees. A knoll of slightly
higher ground, just
out of water, has a
forest of *Betula papyrifera*.
The only tree that has
at all stood the flooding
is a species of *Fraxinus*,
which is half dead.

In areas of dead trees
Nuphar and *Nymphaea*
are abundant.

In one of the trees a
pair of ashery are nesting.

A grebe seen at edge
of marshy area. A flock
of ducks scared up by
boat.

Zizania has been
introduced and tends
to crowd everything out.

Left. 3 - just north of Higgins
Lake - white pine saplings
growing abundantly in
rather thin shade.

Sept. 3 - Hartwick Pines State Park
north of Grayling & east of Fredonia
A stand of very tall
white pine on flat
site - soil profile
of litter 1-2 cm., dark
brown humus 2 cm., gray
fine sand 15 cm., then
a yellow-brown layer
over yellowish sand
parent material. The
white pines are 100-150 ft.
tall, 2-12 dm. thick, with
long clear boles. Mixed
with fairly large hemlock
red maple & sugar maple
75-100 ft tall. Good second
story developed locally
of maples, with many
maple seedlings there
badly browsed. Little
ground cover except maple
seedlings and a few ferns.

On slope above there
is an admixture of
tall red pine, more slender
than the white pine.

Surrounding area
in a very open stand
of young pines with
bracken, ~~and~~ Rubus
and grass between.

To the north of
Hartwick Pines is a long
stretch of *Pinus banksiana*, mostly
young on sandy
pale brown soil. Then
on more gravelly soil
a pine - oak mixture,
with some patches
of aspen.

Sept. 3 - 3 mi. n. of Lewiston
Montmorency Co.

Outwash plain, Grayling
sand - covered by a
mixed woodland ~~so~~^{comprised} of
Pinus banksiana and
Quercus, with some aspen.
Shrubs of *Crataegus* and
~~Franseria~~ *Salix*. Dense
ground cover of bracken,
Arcostaphylos, *Vaccinium*,
Carex and many herbs,
with *Comptonia* common.

This on a yellow-brown
sand darkened in the
top 2 inches, scarcely
leached.

Just up the road on
gravelly morainal material
Roselawn soil, there is
dense second-growth

J. virginiana wood of *Quercus*, aspen,
J. elliptica, *Amelanchier*, *Acer rubrum* ~~bottae~~^{bottae},
undergrowth of *Corylus*, *Salix*, *Pteridium*.

Michigan

Sept. 3 - 3 mi. e. of Vienna
stand of northern
hardwood forest on Cornell
soil.

Beech-maple selectively
cut 50 years ago (for size).
Acer nigrum, *Fagus*,
Populus grandidentatum.
The beech is up to 16 in. diam.
maples smaller. A few
elms. Almost no ground
cover except beech and
maple seedlings. Some
locally bestes, such as
Botrychium virginianum,
Dryopteris austriaca, *Viola*
canadensis, *V. sororia*, *Gaultheria*
diplophyllum.

The trees are about
40-50 ft. tall mostly 5-12
in. dbh. Canopy perhaps
95%. No second story
except a few scattered saplings.

Soil gray for 3-4 inches,
sandy, then yellow-brown.

Sept. 3 17 mi. n. of Atlanta,
north of Clear Lake.
Jack pine woodland on ~~flat~~ sand
plains.

- 36568 *Polygonella stipulata*
- 69 *Arctostaphylos uva-ursi* L.
abundant in ground layer
- 70 *Pinus banksiana*
dominant in

Sept. 3 - 13 mi. n. of Atlanta,
north of Clear Lake,
Montmorency Co.

Jack pine plains,
sparse woodland
of trees uneven in size,
up to 10 m. tall, a few
small oaks. Ground
cover of *Arctostaphylos*
uva-ursi where trees are
closely spaced, in more
open places with *Vaccinium*,
Comptonia, *Andropogon*
gerardii, and *Prunus susque-*
hanae.

7 hrs on sand. Top 2-3
inches grayish bluish,
gradually changing to
yellow brown, changing
downward to tan. All
sand, no leached layer.
Small patches of small
oaks and aspen to north,
also open areas with
scattered clumps of
much more stunted pine
and scattered stunted oaks.

- flowers white.
- prostrate, leaves glossy,
- fruit red.
- small tree 4 m. tall.

Sept. 3 - Osawaway State
Park, Black Lake
Deciduous forest on alluvial
soil - rather dense and
scrubby second growth
with scattered large
trees. Large trees a
Tilia, *Quercus*, *Populus*
grandidentata, *T. suga*
and a few white and red
pines. Rare big white pine.
Small tree mostly
Ostrya, *Acer nigrum*, *Fraxinus*
Quercus velutina, *Tilia*,
some *Betula papyrifera*
toward lake.

Fair shrub layer
1-2(-3) m. tall of tree seedlings.

Dryas integrifolia near lake.

Sparse herb layer with
Hepatica, *Actaea pachypoda*,
Aster macrophylla, *Cass.*, etc.
and seedlings of trees.

left. 4 - $\frac{1}{2}$ mi. south of Cross
Village

Flat ground bounded behind
a wide belt of dunes
bordering lake. Flat ground
is of Kalkaska sandy soil,
gray upper layer, then
a purplish chocolate brown,
below this drift.

This bears a magnificent
northern hardwood forest.

The trees are *Fagus*, *Betula*
cutea, *Acer nigrum*, *Fraxinus*
mrix, a *Tsuga*, a little
Betula papyrifera.

Complete range in size
in trees, preponderance
of small, but up to
3 ft. & over 1' dbh. (smaller
hemlock) beech, oak &
yellow birch to 18 inches.

Never a sparse shrub
layer of peach, maple,
and hemlock saplings.
Herb layer sparse and local,

36571 *Lycopodium annotinum*
in forest on top of dune

72 *Epifagus*.
on beech roots in depression
in dunes.

of *Maianthemum*,
Polygonatum multiflorum,
Clintonia, *Mitchella*,
Lycopodium obscurum,
Acer seedlings, *Acer pennsylvanicum*
seedling, oak seedlings
sprouting of trees, 2-3 m.
lots of rotting logs,
a little unsystematic
cutting evident.

There are about 5 dune
ridges bordering lake.

The dune forest has
about the same composition
but different proportions,
some different species. — much
more oaks, more *Acer pennsylvanicum*, some *Amelanchier*,
many more herbaceous
species and much more
herbaceous ground cover.
The trees average much
smaller and on ridges much
lower status. Undergrowth
of *Tsuga* thick in places.

Sept. 4 - Sturgeon Bay,
An irregular sand
flat (an old town site abandoned
a few years ago) surrounded
by high dunes, the lake
front with a low dune
ridge.

Lake Michigan

- irregular sand flat, and low dunes.
- 76573 *Cornus sericea* f. *baillyana*
74 *Populus balsamifera* x *deltoides*?
- 75 *Potentilla fruticosa* L.
scattered on
- 76 *Campanula rotundifolia*
occasional
- 77 *Anemone cylindrica*
occasional.
on high dunes
- 78 *Myosoton aquaticum*
occasional
- 79 *Aristostaphylos uva-ursi* L.
locally dominant

land flats dominated
by *Calamovilfa* + *Aristostaphylos*,
scattered bushes of
Potentilla fruticosa, scattered
Artemisia and *Cirsium pitcheri*.
Dunes with clumps and
groups of *Pinus strobus*,
with some *Picea glauca*,
even *Thuja* + *Juniperus*
communis var. *depressa*,
(stems spreading and
ascending to 3-4 dm. tall,
clumps several m. across,
compact) *Aristostaphylos*
and *Calamovilfa* dominant
in open, clumps of *Cornus*
sericea and *Brunnus allegheniensis*,
shrub, forming clumps.
shrub 1-2 m. tall,
buds filled with
aromatic resin, leaves
pale beneath,
compact clumps, ♀ petals
yellow, mostly gone,
flowers blue ~~greenish~~
purple.

prostrate shrub,
fruit red.

108 Michigan

36500 *Limadina stellata*
local

81 *Calamovilfa*

usually dominant

82 *Juniperus communis* var. *pyramidalis*
very common

83 *Thymia plicata*
occasional

~~cont'd~~

Sept. 4 - Cecil Bay, Lake Michigan
Wet rock flat, just
above water - with
Juniperus, *Lobelia*, *Nigella*,
Gerardia, *Holodiscus*, *Potentilla*,
Gutierrezia.

Back of this as parallel
beach ridges covered by
mixed coniferous forest
of *Abies*, *Thymia*, *Pices*,
Pinus strobus, *P. resinosa*,
Betula papyrifera, *Populus*
tremuloides.

No shrub layer except

34 *Coronis rugosa*
in coniferous forest.

Emmet Co.

109

low spreading clumps
several m. across and
3-4 dm. high.
stunted trees & - tall

occasional saplings and
rare *Coronis rugosa*.

Where light gets in
Iris lacustris forms
patches, some *Linnæa*,
also, and *Coronis canadensis*,
Carex, etc. Patches also
of *Aster macrophyllus*,
fir seedlings are
common. Elsewhere
the flora is absolutely
bare except for moss
patches.

shrub.

Sept. 4 -

long point projecting into lake, with a sand flat with parallel beach ridges of sand, a pond a lagoon back of outer one. *Calamovilfa*, *Arcostaphylos* and *Juniperus horizontalis* are stabilizing the sand on these ridges. The *Juniperus* is really extremely prostrate and creeping.

The highest of these ridges has *Juniperus communis* var. *depressa*, with an open woodland of *Thuja*, *Pinus strobus*, *Picea* etc. extending back from it on a strip of low dunes, the spaces between the trees filled by *Juniperus communis* var. *depressa* and some *Juniperus horizontalis*.

~~sand ridges~~

36585 *Solidago* *broughtonii*
occasional on ^{low} open sand ridge

86 *Juniperus horizontalis*
common on low sand ridges

37 *Zygadenus glaucus*
occasional on sand

Back of this is an extensive ^{open} flat of sand and small gravel with low wet spots and ponds. Where this is dry *Potentilla fruticosa*, *Gentiana crinita*, *Lobelia laevigata*, small junces, *Solidago broughtonii*. Low spots have *Juncus* spp., *Tragopogon*, *Carex* *americanus*, *Carex* *virginiana*? etc. Toward the other side of the point and open water are extensive cobble or shingle flats, the rocks partly limestone examined there for algae in the surface but did not find any evidence except on the surface. The rocks are colored a blue-gray on the upper side.

erect, flowers yellow.

absolutely prostrate, extending several m. horizontally, only 4-2 dm. tall in center of patch.

112 1955 Michigan

- 36584 *Hypericum*
common on low sand ridges
- 89 *Gerardia*
common on pebble and sand flats
- 90 *Hobelia kalmii*
common on pebble and sand flats
- 91 *Cirsium pitcheri*
occasional on sand ridges
- 92 *Rhynchospora*
abundant on shingle flat.
- 93 *Castilleja coccinea*
rare on shingle and wet sand.
- 94 *Eutrema*
common on gravel flats
above water line.
- 95 *Gentiana crinita*
common on sand and
gravel flats
- 96 *Solidago borealis*
common on gravel flats
- 97 *Pinguicula alpina*
rare on wet sand
- 98 *Elaginella*
common between rocks on
wet shingle flats.
- 99 *Tofieldia*
rare on wet gravel flats
- 36600 *Patrinia arkansana*
occasional on wet gravel flat
- 01 *Utricularia*
rare on wet gravel flat

113

- flowers rose purple.
- flowers pale blue - lavender,
erect.
- bracts bright red, & corolla
yellow.
- flowers yellow.
- flowers bright blue.
- flowers yellow.
- leaves pale green.
- prostrate
- aromatic, plant purplish,
- flowers pink - purple.
- scapes erect, vegetative
parts not evident.

Sept. 4 - Douglas Lake

A kettle-hole bog near
village -

An open pool of brown water
with a few plants of *Nymphaea*.
Around this a belt of
Sphagnum a few yards
wide with *Chamaedaphne*
dominant, some *Andromeda*
and *Kalmia polifolia*. Here
Sarracenia is abundant -
said to be introduced but probably
not.

Picea mariana is invading
this. *Pinus strobus*
approaches to within 50 ft

36602 *Kalmia polifolia*

occasional on sphagnum
mat around bog.

03 *Arenthobium*

parasitic on small

Picea mariana growing on *Sphagnum*
Schenkleri

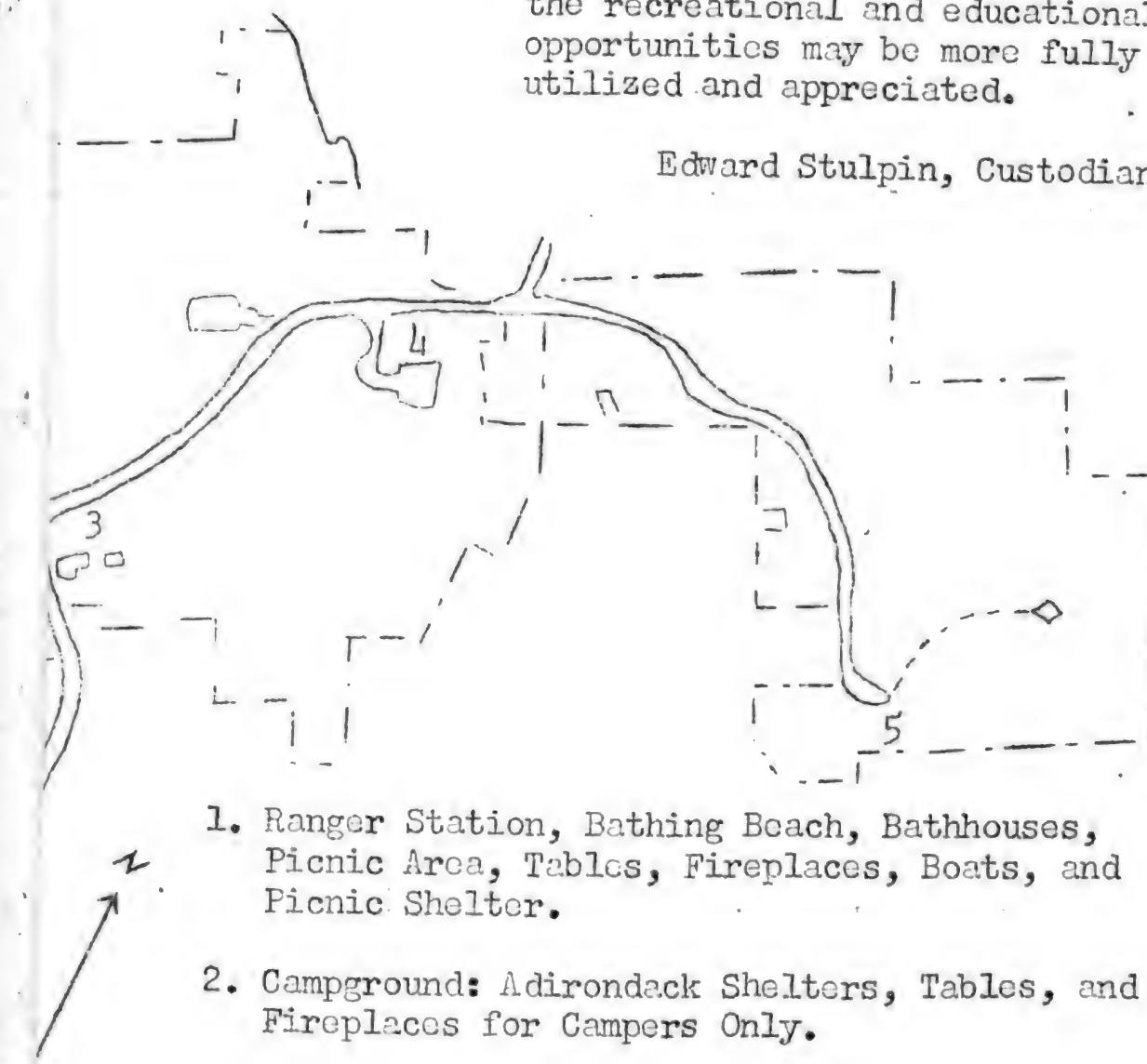
rare on sphagnum

04 *Lilacina trifolia*

local on sphagnum in
openings in spruce-pine wood.

This bulletin is prepared for the
guests of the State Park so that
the recreational and educational
opportunities may be more fully
utilized and appreciated.

Edward Stulpin, Custodian



1. Ranger Station, Bathing Beach, Bathhouses, Picnic Area, Tables, Fireplaces, Boats, and Picnic Shelter.
2. Campground: Adirondack Shelters, Tables, and Fireplaces for Campers Only.
3. Headquarters, Parking overlooks.
4. Center Hill, Picnic Area, Parking overlook, Overlook ledges, Foot Trails, Picnic Shelters.
5. Base of Mt., Parking Area, Trail to Summit 1.5 miles, 47 foot Tower at Summit, Fire Tower Watcher on duty May - November.

114 1955 Michigan

Sept. 4 - Douglas Lake

A kettle-hole bog near
village -

An open pool of brown water
with a few plants of Nymphaea.
Around this a belt of
Sphagnum a few yards
wide with Chamaedaphne
dominant, some Andromeda
and Kalmia polifolia. Here
Sarracenia is abundant -
said to be introduced but probably
not.

Picea mariana is invading
this. Pinus strobus
approaches to within 50 ft

36602 Kalmia polifolia

occasional on sphagnum
mat around bog.

03 Acanthobium

parasitic on small

Picea mariana growing on Sphagnum

1 04 Schreutzeia

rare on sphagnum

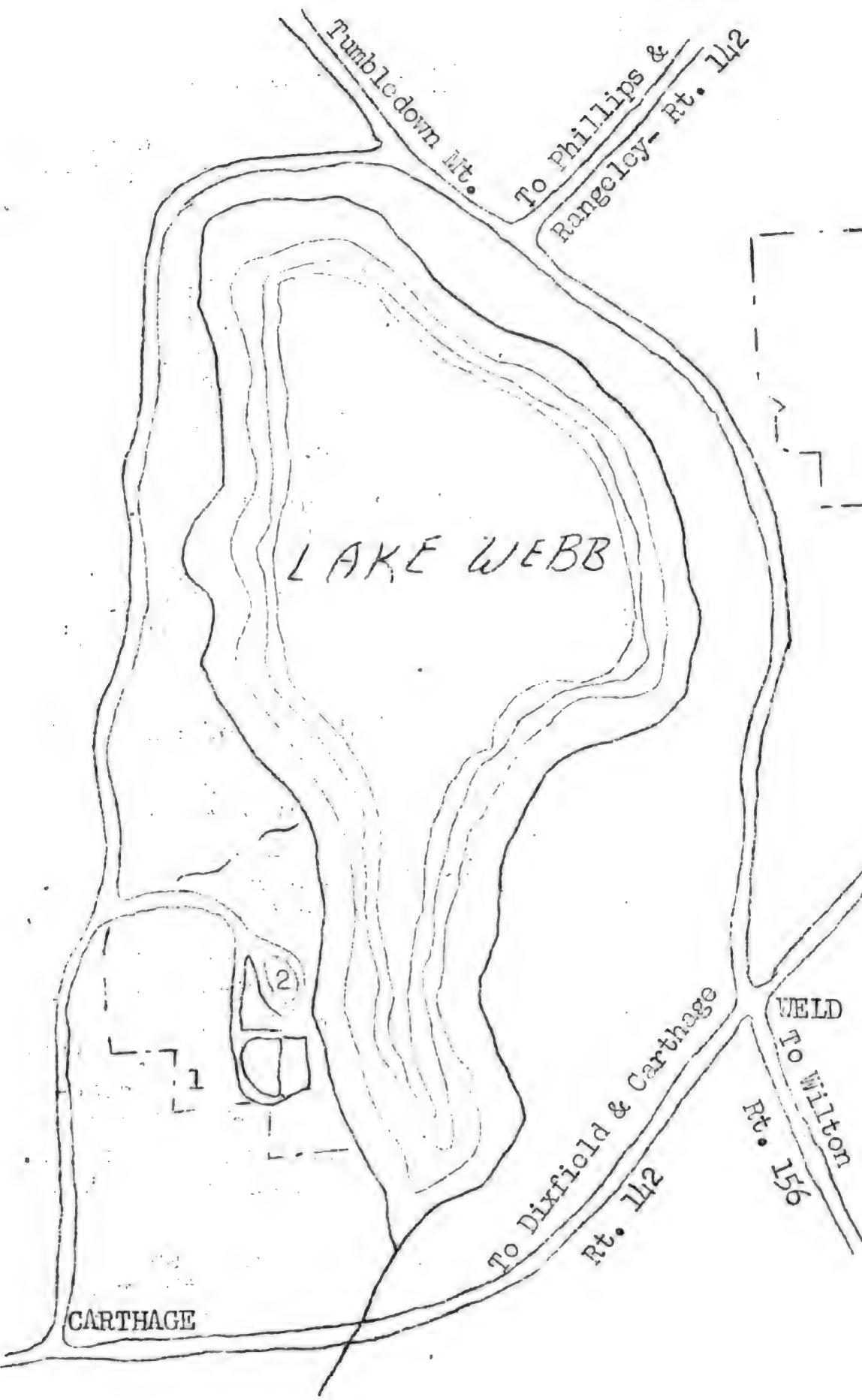
05 Smilacina trifolia

local on sphagnum in
openings in spruce-pine wood.

115

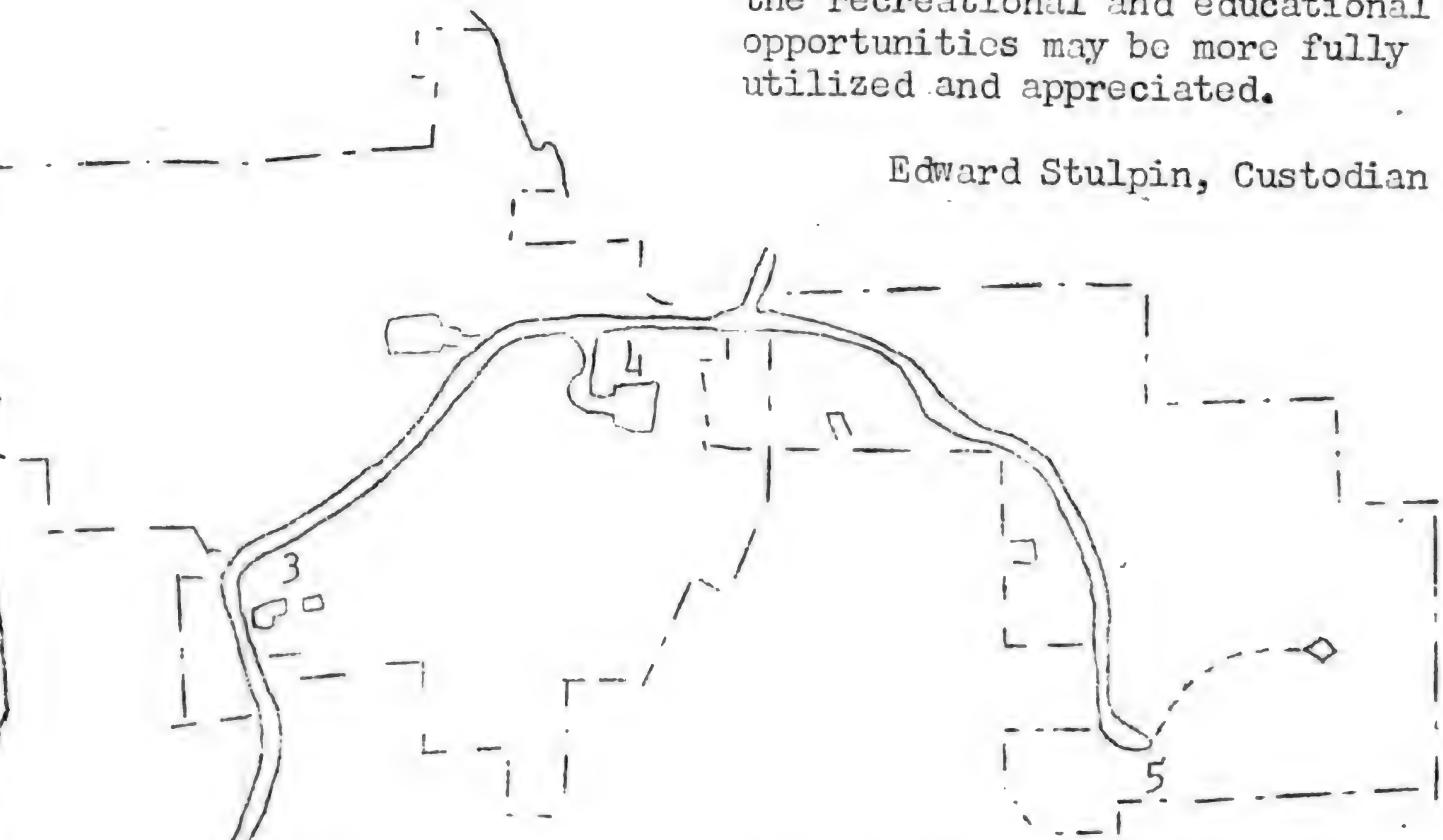
of open water. Spruce-
pine forest surrounds
the bog. Polziger, who
studied this bog many
years ago, says that
succession here is
proceeding very rapidly,
quite noticeable difference
in 25 years.

small shrub



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MOUNT BLUE STATE PARK is located in the towns of Weld and Avon in Franklin County, Maine. Lake Webb and the Town of Weld are situated in a beautiful valley surrounded by rugged mountains. The State Park consists of 4,927 acres and embraces Mt. Blue (3187'), Hurricane Mt. (2484'), Little Blue (2001'), and Center Hill (1620').

HISTORY

The State Park was built in 1936-38 with Federal funds made available to the United States Department of Agriculture. Sub-marginal farmlands were converted into Mt. Blue State Park and named for the most prominent mountain in the vicinity. Roads, trails, beaches, shelters and picnic tables were built by labor recruited from the unemployed prevalent at that time.

FAUNA

Here may be seen moose, deer, rabbit, wildcat, woodchuck, squirrel, muskrat, mink, beaver, weasel, woodcock, ruffed grouse, migratory water fowl, owls, salmon, brook and brown trout, perch, bass, and pickerel.

FLORA

The forest growth consists of a mixed forest of hard and soft woods, and a ground cover of dense and thin underbrush, wild flowers, grasses, ferns, and mosses.



FACILITIES

Center Hill - East side of Lake Webb

The park headquarters are located in the fine old Cape Cod house on Center Hill.

A short distance beyond, well up on Center Hill, are 20 picnic tables, 18 fireplaces, latrines, 2 shelters, trails, spring water and parking.

The scenic view is one of the loveliest in our state and the fall foliage is spectacular.

The trail to the summit of Mt. Blue (1.5 mi.) begins at parking area at foot of mountain. There are two springs to refresh the climber. A fire lookout is on duty in the 47' steel tower.

Webb Beach - West side of Lake Webb

The bathing and picnic area has a fine sandy beach with bathhouse, latrines, picnic tables and fireplaces, drinking water and parking. Boats may be rented from the Ranger.

The campground has 45 individual sites, complete with fireplace and table. Toilet facilities and drinking water are available. Bathing may be enjoyed either at the campground or the main beach which are connected by a woodsey shaded trail. The camping facilities are for the campers only.

There are also Adirondack shelters for campers. These have their own sandy beach in addition to other facilities.

left. # - East Lansing - University sugar bush - a patch of beech-maple wood being run for maple sugar - rather disturbed looking.

some elms and *Fagus americana*.

Trollia virginica is very prominent in undergrowth surrounded on at least two sides by swamp forest of *Ulmus*, *Fraxinus*, *Acer rubrum*,

left. # - Rose Lake

Oak upland woods trees of all sizes, up to 1 ft. dbh and 30-50 ft. tall - oaks some hickory, red maple, and a swarm of hybrids bet. *Prunus pensylvanica* and *P. virginiana*

136606 *Pyrola elliptica*
1 07 *Galium boreale* L.

Bog surrounding lake

1 08 *Galium*
1 09 *Spiraea alba*
common

This bog had the water level lowered 2 ft in 1914, 2 ft. more in 1930. Burned over, down to water level. The resulting habitat was invaded by

Dansereau says that in this area (the "oak-hickory bulge") there is a definite correlation between the occurrence of beech-maple and swamp forest - thinks there is a definite dependence on moisture relations set up by swamp.

little shrub layer - except locally thick *Cornus racemosa* colonies. Rich herb layer. Black oak was logged out in 1943.

shrub 1 m. tall

Typha, forming now an extensive stand, with *Scirpus*, over much of the floating mat. Other parts of the mat are dominated

by *Thelypteris palustris*
and *Carex lasiocarpa*, with
many herbs and much
Sphagnum. Locally very
different *Carex lasiocarpa*
dominant with locally
much *Osmunda regalis*.

The open part of this
is about 75 m. wide. It is
strongly invaded by *Larix*,
Rhus vernix, *Acer rubrum*,
Cornus paniculata, etc.

Toward the shore in places
are patches of *Chamaedaphne*
and *Cornus paniculata*.

The whole is surrounded
by a swamp forest dominated
by red maple up to 15 cm.
d.b.h. growing on deep peat.

~~36610~~

Sept. 9 - Michigan State University
Campus, East Lansing, ~~Pontiac~~
Planted as ornamentals

36610

11 *Juniperus*12 *Spiraea*

In this swamp is a small
pond in which the open
zone and invasion are
only a few m. wide.

— shrub with semi-weeping habit
— erect columnar tree
— gray-green shrub.

left 10 - Oak Openings Park
This is a tree

This is a tract of about 3000 acres in the old "Oak Openings" forest type on sandy soil of the old glacial lake bottom (when

extended much farther than it does now). This forest of large oaks was ~~too~~ free enough of undergrowth to drive wagons through at the time of first settlement.

The land is now quite heterogeneous, with patches of very different history, much of it having been cleared.

One place in the northwest corner of the park is relatively mature oak forest - large *Quercus alba*, *Q. coccinea*, *Q. rubra*, up to 2' dbh, 30' tall, some admixture of *Acer rubrum* 80-90% canopy, some stumps. ^{a very little carpet and a few dead trees.} thick undergrowth of saplings of *Acer rubrum* and *Hammamelis*. Thin herb and grass cover, low spots almost bare and free of undergrowth.

*Other
few
small
trees*

Much of the park was low swampy land but was drained some years ago. Came up to forest. Now a few areas have been cleared of aspen, cottonwood, maple, etc. and the drainage ditch dammed. This results in flooding of low areas till about June, when water table goes down. This area has a rich growth of tall perennial herbs.

Dry cleared land, abandoned, has less species, mostly different.

A first year abandoned corn field is a solid stand of *Ambrosia artemisiifolia*, with understory of *Bulbostylis capillaris*. A few miscellaneous herbs.

In the dry years of 1952-3 they lost many trees in the high areas, mostly oaks.

One area of about 10 acres of moving dunes. Larger areas of stabilized dunes.

Flora of the Oak Openings, by E.L. Moseley, Proc. Ohio Acad. Sci. 3(?) Sp. Pap. 20: 31-34, 1923.

Sept. 11 - To Cook Forest

Longfellow Trail to cathedral.

This trail goes up a steeply sloping valley with a ~~rough~~^{wavy} floor of large boulders, steep sides. Forest on this of large white pine and hemlock and a few large red oaks. These trees are tall, perhaps over 150'.

They are not closely spaced.

The second story forms a canopy at 50-60' of red maple, beech, yellow birch, oak.

Under this is a thick undergrowth of hemlock saplings 6-10' tall, a few saplings of hardwoods, none of pine.

Ground layer of *Dryopteris austriaca* and moss (on rocks) with a few broadleaf herbs.

Above this the valley opens out some into the rolling Cathedral area with many big trees, mostly white pines, up to practically 200' tall.

More young beech and red maple here.

Patches of bracken and of bare ground.

124

955 Virginia

Sept. 15 - Sleepy Hollow,
1 1/2 mi. s. of Falls Church,
along Tripp's Run

36613 *Andropogon gerardii*
a few clumps in abandoned
pasture invaded by
shrubs.

13a *Ipomoea*
weed in yard around dwelling

Sept. 16 - Markham,

141 *Botrychium*
in apple orchard on low
foothills.

15 Sept. 23 - Great Falls
of the Potomac
floating on surface of Clay Pond,
abundant.

15 *Spirodela macrophylla*

16 *G. Wolfia*

Fairfax Co.

125

strictly erect large
clumps, spikes bronze
to purple.

twining, climbing over
herbs, flowers white,
stigma capitate.

Fairfax Co.

deep green, purple below, flat.
pale green, terete.

3661^b
126

El Virginia

Oct. 7 - Shenandoah Valley Overlook
 Patch of *Pinus virginiana*
 to north at about 1700'
 Slopes below overlook -
 mixed second-growth with
Ulmus, *Diospyros*, *Liriodendron*,
Cornus, *Robinia*, *Cercis*, etc.
 tangled with *Vitis*, *Lonicera*, etc.

Dickey Ridge Lodge

Thicket of *Robinia* with
 scattered juniper pine, *Sassafras*
 etc. 2-3 m. tall very dense.
 with *Lonicera japonica* -
 in old meadows.

Mixed *Robinia* thicket
 2-4 m. tall with scattered
 pine about 6-8 m. tall.

Along drive *Sassafras*
 and *Carya* (2 sp) are
 yellow and conspicuous,
 form an appreciable part
 of cover.

Oct. 7 - Dickey Ridge Lodge
 3661^ba *Asclepias varidens?*
 grassy roadside

Shenandoah Nat. Park

127

Oct. 7 - Gravel Springs Shelter

Bluff trail north -
 through mixed forest
 on rolling slopes -
Carya (2 sp), *Quercus*
pinnata, *Q. rubra*, *Tilia*
americana, *Betula lenta*,
Sassafras, *Robinia*.

Toward Big Devil stains
Quercus pinus becomes
 most abundant. Here there
 are many signs of an
 old fire - partially charred
 logs, etc. Many fallen
 chestnut logs. Some recent
 windfalls, perhaps
 from one of the recent
 hurricanes. One large
Liriodendron seen.

Several hundred feet
 down the Devil's stain *Tanya*
 appears, becoming more
 numerous along the
 stream downward.

Several hundred feet
 more, *Liriodendron* appears.
 Large *Liriodendron* 6 dm.
 badly scarred by
 sapsuckers.

erect, not erect.

Mr. Francis Doughter,
sheriff of Warren Co. said
that when he was a boy
(40-50 years ago?) 1500 acres
of land on this slope of
the Blue Ridge was owned
by John J. Miller and used
for extraction of tan-bark.
Roads were built all
through the area. Special
wagons with hind
wheels as well as front
on a long pin, were built
in Front Royal for hauling
out tan bark from chestnut
oak and chestnut. The
wood of the chestnut
was used but that of
the oak was left to rot.
The trees were cut about
6 or 8 feet above ground,
as the diameter was less than
cut at comfortable height
by man standing on
slope above. Then logs
and stumps were peeled.

Oct. 7 - Bluff Trail, north of
Gravel Springs, Rockingham Co.
mixed woods on east slope,
very rocky soil.

- 36617 *Hedysarum purpurea* var. *longifolia*
locally abundant in rocky spots.
18 *Fraxinus americana*
fairly common

caespitose; flowers pale
purple.
heavily fruiting branches
with yellow leaves.

130

1955 Virginia

- 36619 *Laportea canadensis*
abundant in wet places
- ✓ 20 *Crataegus margaretae* Ashe
rare in thin place in ~~the~~
- ✓ 21 *Thelypteris noveboracensis* (L.) Nieuwl.
very local
- ✓ 22 *Physocarpus opulifolius*
local in thin place in
- ✓ 23 *Aster patens* Ait.
local in shaded rocky place
- ✓ 24 *Hamamelis virginiana*
common

Oct. 9 - Gravel Springs,
Rockingham Co.

- 25 *Polygonia canadensis*
moist opening

Rockingham Co. Then Natl Park 131

- herbs, 1-2 m. tall
leaflets below; distal
branches of inflorescence
swollen and fleshy; fruits
reflexed under winged
pedicels, edge downward
perpendicular to pedicel, some
swollen, subglobose and
fleshy (probably galled).
shrub 2 m. tall;
fruit red, fleshy,
acid but not unpleasant
to taste.
rhizome horizontal,
buried.
shrub 1 m. tall bark
shredded.
rays violet, disk
pale yellow, becoming
dark red.
shrub 2 m. tall, petals yellow
crispate.

aromatic.
herb 1 m. tall, heads
~~contain~~ nodding; flowers
pale yellow.

Oct. 9 - Gimlet Ridge Overlook 2675'

Lower slopes of valley largely dominated by tulip or in places by oak-hickory, giving way upward to a mixture of oak-hickory-ash. The hickory yellow-orange, the ash purplish, the oak not turning yet. Tulip not or scarcely turning yet. Steep rocky slopes to S.W. are apparently largely birch-turning a yellowish green (Gimlet Ridge).

Area around overlook itself largely in red oak with some hickory and birch. Robinia coming in in openings.

Range View Overlook.

Slopes of Harris Hollow covered by a mixed forest oaks of several kinds, ash, birch, hickory, sassafras, very few myrsinaceae (bright red).

Down lower tulip becomes abundant. Ash dull purple.

Up in area just below saddle is patch of Robinia-pale dull yellowish green.

Generally, on these slopes oak makes up about $\frac{1}{2}$ of cover ash and hickory perhaps $\frac{1}{6}$ each.

Almost pure red oak around overbooks.

" Oct. 25 - Sleepy Hollow, 1 mi. s.
of Falls Church

36626 *Ceratopteris*
cultivated in a ~~large~~
aquarium, indoors, under
artificial light; floating.

Dec. 4 - 1.5 mi. w of Camp Washington,
Fairfax

Solid stand of *Pinus virginiana* 3-4 m. apart
70 m. tall, canopy about
60%+ trees 10-30 cm. diam.
smaller trees, overtopped,
dead or dying. Humus 3-6 cm.
or more deep.

Some invasion of *Acer rubrum*, *Nyssa sylvatica*,
~~G~~ *Fraxinus* also

A few small *Ilex opaca*,
~~Passalas~~ *Juniperus virginiana*,
Castanea dentata, *Kalmia latifolia*, *Cornus florida*, *Robinia*.
Tangled here and there
with ~~the~~ *Milax glauca*.
Lonicera japonica sparingly
invading from the edge in
about 30 m. much farther
in places.

Many small pine seedlings
but none developing var.

floating,
produces small plants
on fronds; fertile fronds
emergent, sterile floating or
if at first emergent, soon floating.

ground layer very sparse.
g c-a *Climaphila maculata*
l-l-a *Climaphila umbellata*
la *Mitchella repens*
g a *Vaccinium vacillans*
g la *Lycopodium complanatum*
~ *Asplenium hyperboreum*
~ *Monotropa uniflora*
l *Polystichum acrostichoides*
~ *Gaultheria procumbens*
~ *Dianthalia spicata*

patches or cushions of
Cladonia rangiferina,
"Bartramia"
and, rarely, *Leucobryum* scattered.

Castanea common, up to
5 m. but some killed by blight
or branches cut off much
smaller.

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Molar 8123

Canine 106

Incisor 106

Adult 16 Q

Adult 10 A

Canine 10 P

Premolar 7 A

Incisor 10

